

# Comparisons of Job Characteristics

**Focus Occupation:** Environmental Engineers (17-2081)

**Associated Occupation:** Environmental Scientists and Specialists, Including Health (19-2041)

[Compare Knowledge](#)

[Compare Skills](#)

[Compare Abilities](#)

[Compare Detailed Work Activities](#)

[Compare Tools and Technologies](#)

<<	Focus occupation element is much lower
<	Focus occupation element is lower
0	Focus occupation element is at a similar level
>	Focus occupation element is at a higher level
>>	Focus occupation element is at a much higher level

## Knowledge

Similarity of Focus Occupation to Associated Occupation: 70

**Focus Occupation:** Environmental Engineers (17-2081)

**Associated Occupation:** Environmental Scientists and Specialists, Including Health (19-2041)

Associated Occupation's Key Knowledge Elements	Average Rating, All Occupations	Associated Occupation's Rating	Focus Occupation's Rating	Evaluation of Focus Occupation
Mathematics	9.2	15.5	16.3	0 Current knowledge level may be sufficient
Chemistry	4.8	14.9	15.8	0 Current knowledge level may be sufficient
Biology	3.7	14.8	10.0	<< Extensive education and/or training may be required
Law and Government	5.9	13.5	13.6	0 Current knowledge level may be sufficient
Geography	3.9	12.7	8.3	<< Extensive education and/or training may be required
Engineering and Technology	5.7	12.1	21.7	>> Current knowledge level is likely more than sufficient
Physics	4.3	10.5	15.7	>> Current knowledge level is likely more than sufficient

The maximum possible rating is 25.

Source: Alaska Department of Labor and Workforce Development, Research and Analysis Section analysis of O\*NET (Occupation Information Network) data.

## Skills

Similarity of Focus Occupation to Associated Occupation: 91

**Focus Occupation:** Environmental Engineers (17-2081)

**Associated Occupation:** Environmental Scientists and Specialists, Including Health (19-2041)

Associated Occupation's Key Skills Elements	Average Rating, All Occupations	Associated Occupation's Rating	Focus Occupation's Rating	Evaluation of Focus Occupation
Reading Comprehension	10.7	16.1	16.4	0 Current skill level may be sufficient
Science	4.5	15.7	11.4	<< Extensive development of skills in this area may be required
Writing	9.2	14.4	12.8	< A higher skill level may be required
Complex Problem Solving	9.1	13.4	13.9	0 Current skill level may be sufficient

Judgment and Decision Making	9.4	13.1	13.9	0	Current skill level may be sufficient
Active Learning	8.7	13.0	11.5	<	A higher skill level may be required
Mathematics	6.2	12.2	12.3	0	Current skill level may be sufficient
Coordination	9.1	11.8	9.7	<	A higher skill level may be required
Learning Strategies	7.2	11.7	8.7	<<	Extensive development of skills in this area may be required
Systems Analysis	6.5	10.6	13.1	>	Skill level is likely sufficient
Operations Analysis	5.0	9.3	11.0	>	Skill level is likely sufficient
Programming	2.2	6.3	5.6	<	A higher skill level may be required

The maximum possible rating is 25.

Source: Alaska Department of Labor and Workforce Development, Research and Analysis Section analysis of O\*NET (Occupation Information Network) data.

## Abilities

Similarity of Focus Occupation to Associated Occupation: 96

Focus Occupation: Environmental Engineers (17-2081)

Associated Occupation: Environmental Scientists and Specialists, Including Health (19-2041)

Associated Occupation's Key Abilities Elements	Average Rating, All Occupations	Associated Occupation's Rating	Focus Occupation's Rating		Evaluation of Focus Occupation
Inductive Reasoning	10.2	16.5	15.4	0	Current ability level may be sufficient
Written Comprehension	11.0	16.3	16.0	0	Current ability level may be sufficient
Problem Sensitivity	11.1	15.8	17.0	0	Current ability level may be sufficient
Deductive Reasoning	10.6	15.1	16.2	0	Current ability level may be sufficient
Written Expression	9.8	14.4	13.9	0	Current ability level may be sufficient
Category Flexibility	9.0	13.0	13.6	0	Current ability level may be sufficient
Information Ordering	9.9	12.9	14.2	>	Current ability level is likely sufficient
Mathematical Reasoning	6.3	12.2	13.4	0	Current ability level may be sufficient
Number Facility	6.3	11.9	11.7	0	Current ability level may be sufficient
Flexibility of Closure	7.8	11.6	13.5	>	Current ability level is likely sufficient

The maximum possible rating is 25.

Source: Alaska Department of Labor and Workforce Development, Research and Analysis Section analysis of O\*NET (Occupation Information Network) data.

## Activities that Both Occupations Have in Common

Similarity of Focus Occupation to Associated Occupation: 87

Focus Occupation: Environmental Engineers (17-2081)

Associated Occupation: Environmental Scientists and Specialists, Including Health (19-2041)

Work Activities	Exclusivity of Activity
Adhere to safety procedures	12
Advise clients or customers	19
Advise governmental or industrial personnel	28
Analyze ecosystem data	69
Analyze scientific research data or investigative findings	27

Collect scientific or technical data	30
Communicate technical information	4
Compile numerical or statistical data	38
Confer with engineering, technical or manufacturing personnel	25
Confer with scientists	54
Create mathematical or statistical diagrams or charts	43
Develop or maintain databases	30
Develop plans for programs or projects	31
Develop policies, procedures, methods, or standards	21
Develop tables depicting data	33
Direct and coordinate activities of workers or staff	3
Direct and coordinate scientific research or investigative studies	27
Explain complex mathematical information	30
Follow safe waste disposal procedures	50
Plan scientific research or investigative studies	48
Prepare environmental impact or related environmental reports	81
Prepare reports	8
Prepare safety reports	60
Prepare technical reports or related documentation	22
Read maps	42
Resolve engineering or science problems	46
Supervise pollution control workers	92
Test air quality, noise, temperature, or radiation	82
Use building or land use regulations	65
Use computers to enter, access or retrieve data	3
Use government regulations	44
Use hazardous disposal techniques	80
Use hazardous materials information	35
Use knowledge of investigation techniques	16
Use library or online Internet research techniques	21
Use mathematical or statistical methods to identify or analyze problems	30
Use pollution control techniques	62
Use quantitative research methods	35
Use relational database software	26
Use scientific research methodology	21
Use spreadsheet software	18
Use word processing or desktop publishing software	17

Not all positions in these occupations will necessarily perform all of the listed activities. The exclusivity rating is an indication of how unique the activity is amongst all occupations. The maximum rating is 100. High scores indicate that only a small number of occupations engage in that activity.

Source: Alaska Department of Labor and Workforce Development, Research and Analysis Section analysis of O\*NET (Occupation Information Network) data.

## Tools and Technologies that Both Occupations Have in Common

Similarity of Focus  
Occupation to Associated  
Occupation: 78

**Focus Occupation: Environmental Engineers (17-2081)**

**Associated Occupation: Environmental Scientists and Specialists, Including Health (19-2041)**

<b>Tools and Technologies</b>	<b>Exclusivity</b>
Audio and visual equipment	4
Business function specific software	1
Chemical evaluation instruments and supplies	10
Chromatographic measuring instruments and accessories	16
Computer data input devices	2
Computer printers	2
Computers	1
Content authoring and editing software	1
Data management and query software	1
Development software	4
Electrical measuring and testing equipment	7
Electrochemical measuring instruments and accessories	9
Fluid mechanics equipment	11
Gas analyzers and monitors	10
Hydrological instruments	31
Indicating and recording instruments	2
Industry specific software	1
Information exchange software	1
Light and wave generating and measuring equipment	4
Liquid and gas flow measuring and observing instruments	15
Liquid and solid and elemental analyzers	19
Network applications software	1
Sampling equipment	12
Soil measuring equipment	20
Spectroscopic equipment	10

Not all positions in these occupations will necessarily use all of the listed tools and technologies. The exclusivity rating is an indication of how unique the tool or technology is amongst all occupations. The maximum rating is 100. High scores indicate that only a small number of occupations use that tool or technology.

Source: Alaska Department of Labor and Workforce Development, Research and Analysis Section analysis of O\*NET (Occupation Information Network) data.